

MECHANICAL ENGINEERING

Mechanical engineering is the study and development of machines and systems that have useful applications. Mechanical engineers apply the principles and problem-solving techniques of engineering from design to manufacture and marketplace for any product or solution. Mechanical engineering involves systems that use principles of motion, energy, and force ensuring the designs to function safely, efficiently, and reliably at a competitive cost. It is a highly diversified field of engineering. It involves areas such as mechanics, thermodynamics, combustion and energy systems, aerodynamics and fluid mechanics, design and manufacturing and mechatronics.



The mechanical engineering degree has a set of state-of-the-art subjects intended to provide the required knowledge and hands-on skills. The degree program includes lectures, labs, engineering design work and projects. The Mechanical curriculum has been designed in consultation with the industry and academic experts in the field. Hence, the graduates could pursue careers in both academia and industry.

CAREER OPPORTUNITIES

- Mechanical Engineer
 - Automation Engineer
 - Design and Manufacturing
 - Industrial Engineer
 - University Lecturer
 - Automobile Engineer
 - Maintenance Engineer
 - Thermal Engineer
 - Entrepreneur
 - Researcher
- Mechanical Engineering is a pioneering and broadest field of Engineering and presently diversified into several specialities.
 - The Mechanical Engineering undergraduate degree typically begins with basic introductory Engineering courses.
 - Once students begin to focus on their major they can expect to find courses in design, manufacturing, mechanics, thermodynamics, and materials.
 - Graduates of a Mechanical Engineering program will have both academic and lab experience with projects in the various disciplines that apply directly to Mechanical Engineering.

ENTRY REQUIREMENTS

Minimum of two "C" passes and one "S" pass in GCE Advanced Level (Local) in the Physical Science Stream (Combined Mathematics, Physics and Chemistry) in one and the same sitting and a pass at the Aptitude test conducted by SLIIT OR Minimum of two "B" passes and one "C" pass in GCE Advanced Level (Cambridge or Edexcel) covering Combined Mathematics, Physics and Chemistry in one and the same sitting and a pass at the Aptitude test conducted by SLIIT

YEAR ONE SEMESTER 01

CE1020	Statics and Hydrostatics	03
ME1050	Introduction to Engineering Design and Communication	04
EC1022	Electrical Systems	03
MA1112	Algebra	04
EL1203	English Language Skills I	03
CE1913	Introduction to Sustainable Engineering	02

SEMESTER 02

ME1031	Engineering Skills Development	03
ME1060	Dynamics	03
MT1011	Engineering Materials	04
MA1122	Calculus	04
EC1450	Fundamentals of Programming	03
EL1213	English Language Skills II	02

YEAR TWO SEMESTER 01

ME2011	Mechanics of Solids I	03
CE2712	Fluid Mechanics I	04
ME2021	Mechanics of Machines I	04
ME2031	Engineering Drawing	04
MA2302	Engineering Mathematics III	03

SEMESTER 02

ME2041	Thermodynamics	03
ME2051	Mechanical Design I	03
ME2100	Manufacturing Processes I	03
ME2170	Electrical Plant	03
ME2081	Engineering Sustainable Development	03
	Humanities I	
Industrial Training 1		
ME2911	Industrial Training I	03

YEAR THREE SEMESTER 01

ME3012	Thermal Engineering Processes	03
ME3100	Manufacturing Processes II	03
ME3031	Mechanics of Solids II	04
ME3041	Mechanics of Machines II	04
	Humanities II	

SEMESTER 02

ME3052	Mechanical Design II	03
ME3061	Fluid Flow Modelling	03
ME3020	Automatic Control I	03
ME3640	Mechatronics Systems	03
ME3081	Engineering Management	03
ME3091	Law for Engineers	03
Industrial Training 2		
ME3911	Industrial Training II	03

YEAR FOUR SEMESTER 01

ME4250	Mechanical Engineering Research Project	03
ME4300	Comprehensive Design Project	03
ME4071	Production and Operations Management	03
ME4132	Professional Practice	02
2 Elective Modules from the following:		
ME4111	Industrial Management and Marketing	03
ME4021	Advanced Engineering Materials	03
ME4030	Vibration	03
ME4050	Computer Aided Engineering	03
ME4081	Computer Aided Design and Manufacture	03
ME4091	Energy Technology and Sustainability	03
ME4101	Refrigeration and Air Conditioning	03

SEMESTER 02

ME4250	Mechanical Engineering Research Project	03
ME4300	Comprehensive Design Project	03
ME4181	Industrial Engineering	03
ME4220	Automotive Engineering	03
2 Elective Modules from the following:		
ME4140	Design for Manufacturing	03
ME4150	Automatic Control II	03
ME4160	Product Design	03
ME4170	Noise	03
ME4190	Advanced Manufacturing Processes	03
ME4201	Energy Conservation & Management	03
ME4210	Fluid Power Systems and Machinery	03

** Electives to be chosen with the prior approval of the Academic Department*